

**Editorial Board Has Charge of Publication Policies.**—The Council has vested the determination of policies for CALIFORNIA AND WESTERN MEDICINE in an Editorial Board consisting of some 31 members who represent the respective specialties, and of whom four constitute an executive committee. Following are quotations concerning their duties from the brochure referred to above:

Responsibility for accepting or declining contributions is an unavoidable duty of the Editorial Board. Evaluation of contributions for purposes of publication, as is the practice of all good magazines, is made by editorial advisers acting under the general rules of the Editorial Board. . . .

The publication of accepted material is perforce governed by many factors, a few of which are: the date of acceptance, the length of the paper, the amount of editorial work required, the subject-matter, available space, condition and amount of the total reserve accepted copy on hand, as well as the balance between subjects in the reserve. Every issue must contain a varied intellectual diet, and this cannot be left to accident in the constant inpouring of copy. Certain official matters about medical organizations, addresses by officers, invited guests, chairmen of sections, offerings of new discoveries, discourses on subjects of seasonal value, and similar matter may receive advanced publication. . . .

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**Policies of the Editorial Board.**—At the recent annual session, it was evident that a few members of the State Association seemingly were not aware of the procedures that are followed in regard to what, and how many original articles may be available for publication in a single issue. The action of the House of Delegates in regard to one resolution submitted, may be found in this issue, on pages 310, and 317.

At the present time the Editorial Board has before it, for consideration, the 97 papers presented by essayists at the recent annual session which, through by-law provision, automatically became the property of the California Medical Association, when they were read to the various Scientific Sections. In addition to those papers, the unpublished files of CALIFORNIA AND WESTERN MEDICINE contain a total of more than 100 manuscripts left over from former annual sessions, or received from county society and other contributors. The authors of these different papers are naturally quite interested in the publication fate of their respective manuscripts. It is a source of regret to the Editorial Board that the space limitations, under these wartime conditions, are such that there is no possibility of increasing the size of CALIFORNIA AND WESTERN MEDICINE. Consequently, only a limited number of the manuscripts in the files can hope for publication in CALIFORNIA AND WESTERN MEDICINE.

The Editorial Board, therefore, trusts that contributors and members will keep the above facts in mind. Nothing would please the Board more, than to be able to print twice or thrice the number of papers that now are given place in the OFFICIAL JOURNAL. After the Duration, that happy arrangement may again be possible.

## EDITORIAL COMMENT†

### CARCINOSTATIC ANTISERUM

About 20 years ago, Brown and Pearce<sup>1</sup> of the Rockefeller Institute became interested in a malignant growth which occasionally develops in old syphilitic scars in rabbits. The growth was evidently a neoplasm of epithelial origin composed of cells allied to those found in the bulbs and root sheaths of hairs. Serial transplantation was readily accomplished in normal rabbits, in which the transplant usually caused multiple metastases leading to death in from 6 to 7 months. In a smaller number of cases the local growth was inhibited within 3 to 4 weeks and the tumor was resorbed.

It was subsequently noted by Kidd<sup>2</sup> that the serums of rabbits in which the tumor had regressed usually contain a specific antibody giving complement-deviation reactions with aqueous extracts of the tumor. The serums reacted negatively with aqueous extracts of normal rabbit tissues, and with extracts of all other neoplasms and virus infections thus far tested. Filtration, centrifugation, enzyme and bacteriologic studies disclosed the fact that the antigenic fraction of the Brown-Pearce carcinoma is a large protein molecule. Tumor extracts containing large amounts of this giant protein give rise to no lesions upon injection into normal or tarred rabbits. The giant protein molecule might be tentatively classified as an atypical or perverted cytoplasmic microsome, conceivably an essential part of the proliferating mechanism of the Brown-Pearce carcinoma cell.

To test this possibility Kidd<sup>3</sup> has currently studied the in vitro reactions between the specific complement-deviating antiserum and living Brown-Pearce cancer cells. Tumor tissue was pressed through a 40-mesh monel metal sieve into Locke's solution, and the resulting suspension incubated for 2 to 3 hours in the presence of the antiserum, control cells being incubated in the presence of normal rabbit serum, or in the serums of rabbits carrying other tumor types. Aliquot parts of the incubated suspensions were injected into the leg muscles of 3 or 4 normal rabbits. The control suspensions in normal serum almost invariably gave rise to tumors reaching 2 to 3.5 cm in diameter within 2 to 4 weeks. Tumor cells incubated with the antiserum almost invariably failed to grow.

The tumor cells were not lysed, agglutinated or otherwise altered in appearance as a result of incubation with this antiserum. They were apparently not killed since the proportion of cells stainable with trypan blue<sup>4</sup> was no greater in incubated mixtures containing antiserum than in

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

control mixtures with normal serum. The pH of the incubated suspensions were the same with the specific antiserum and normal serum. The effects of the antiserum were thus demonstrable only as a suppression of the growth-potential of carcinoma cells.

Attempts were made to stimulate the formation of the same growth-inhibiting antibody by repeated intraperitoneal injection of cell-free Brown-Pearce tumor tissue extracts. The results were negative except with one strain of rabbits, in which about one-third of the animals developed antibodies after 3 to 4 intraperitoneal injections. All animals in which the antibody developed proved to be carcinoma resistant when tested with a small dose of Brown-Pearce tumor cells implanted intramuscularly. All vaccinated rabbits that had not developed a detectable titer of the complement-deviating antibody proved as susceptible as normal rabbits, the intramuscular implantation resulting in large tumor growths.

While many rabbits in which the Brown-Pearce carcinoma has been resorbed develop specific antibodies, others that have overcome the carcinoma develop no detectable humoral antibody. It seems evident, therefore, that resorption of cancer growth can be brought about by factors other than specific antibodies. The nature of these other carcinolytic factors has not yet been determined.

Application of the same serological technique to V2 carcinoma and other rabbit neoplasms is now in progress.

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#### REFERENCES

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2. Kidd, J. G., *J. Exp. Med.*, 71:335, 351, 1940.
3. Kidd, J. G., *Science* 99:348 (Apr. 28), 1944.
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## AGRANULOCYTOSIS

### REPORT OF CASE CAUSED BY SULFADIAZINE

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THERE have been five previous reports of agranulocytosis developing as a complication of the use of sulfadiazine. A sixth case is here reported.

#### REPORT OF CASE

The patient, a twenty-year-old white female, entered Highland Hospital on February 5th, for treatment of a felon. The felon was drained promptly, but on February 8th it was found that an osteomyelitis of the terminal phalanx was present. The patient was placed on sulfathiazole, 1 gram every 4 hours.

On February 15th, after having received 44 grams of sulfathiazole, the patient developed a rise in temperature

and a rash; the sulfathiazole was discontinued and the temperature promptly returned to normal. A white blood count at this time showed 7,200 cells with a normal differential count. Two days later, the patient was placed on 1 gram of sulfadiazine every four hours, and by March 1st there was considerable improvement of the felon. However, on that date, after having received 72 grams of sulfadiazine, the patient's white blood count was 3,000 cells. The differential count on 500 white cells showed less than 1 per cent segmented forms, 1 per cent stab forms, 3 per cent basophiles, and 96 per cent lymphocytes. The hemoglobin was 85 per cent.

On March 1st, the temperature was 100° F., the pulse 120 per minute, and the patient did not appear ill. The pharynx was slightly injected but there were no oral ulcerations. Between March 2nd and 8th, the temperature varied between 101° F., and 104° F., and the patient became progressively more toxic and lethargic. The pharynx gradually became more reddened and the gums edematous with an occasional small patch of pseudomembrane. An ulcer appeared on the gingivolingual mucous membrane. The only complaints during this time were, sore throat, sore mouth, a feeling of lassitude, cough, and a nasal discharge.

During the first eight days of the hospital stay for the agranulocytosis the white blood count dropped to 1,750 cells with a differential count of 1 per cent eosinophiles, 1 per cent basophiles, 4 per cent monocytes and 94 per cent lymphocytes per 500 white cells. On the eighth day after admission, the white cell count and clinical condition showed response to therapy and thereafter rapidly returned to normal. Paul-Bunnell tests performed on the eighth and twenty-first days were negative.

Therapy consisted: (1) discontinuing sulfadiazine;

(2) isolating the patient from exogenous infection;

(3) 40 c.c. of Pentnucleotide intramuscularly daily for a total of 360 c.c.;

(4) 8 c.c. of liver extract intramuscularly daily for a total of 48 c.c.;

(5) approximately 300 c.c. transfusions of whole fresh blood twice daily for a total of 3,200 c.c.;

(6) atraumatic oral hygiene by means of normal saline mouth washes; and

(7) high vitamin C intake.

#### COMMENT

This is the sixth reported case of agranulocytosis caused by sulfadiazine. The patient recovered with the accepted methods of treatment.

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*Pre-Marital Certificates.*—Pre-marital certificates may not be issued in California by drugless practitioners, including chiropractors, because State law limits such authority to duly licensed physicians and surgeons, Attorney General Robert W. Kenny stated in opinion NS5326. Request for the ruling came from Wilton L. Halverson, Director of Public Health. Only those licensed by the Board of Medical Examiners and the Board of Osteopathic Examiners may legally issue such certificates, Kenny stated. He pointed out that a county clerk would be guilty of a misdemeanor if he accepted a pre-marital certificate not made out by a "duly licensed physician or surgeon."

Perseverance is more prevailing than violence and many things which cannot be overcome when they are together, yield themselves up when taken little by little. —Plutarch.

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